



Appl. No. : 10/658,093
Filed : September 9, 2003

AMENDMENTS TO THE CLAIMS

1-67. (Canceled)

68. (Currently Amended) A recombinant construct comprising in operable linkage: a polynucleotide that encodes a polypeptide comprising a protein-destabilizing element, and a nucleic acid sequence that encodes an RNA destabilizing element that reduces ~~modulates~~ the stability of a transcript encoded by the polynucleotide in a eukaryotic cell.

69-107. (Canceled)

108. (Currently Amended) The A construct according to claim 68, wherein the polynucleotide and the nucleic acid sequence are heterologous to each other.

109. (Canceled)

110. (Currently Amended) The A construct according to claim 68, wherein the protein-destabilizing element is selected from the group consisting of: a PEST sequence, an N-terminal destabilizing amino acid and a ubiquitin.

111. (Currently Amended) The A construct according to claim 68, wherein the polypeptide is a reporter protein.

112. (Currently Amended) The A construct according to claim 111, wherein the reporter protein is an enzymatic protein or a protein associated with the emission of light.

113. (Currently Amended) The A construct according to claim 111, wherein the reporter protein is a fluorescent protein or a luminescent protein.

114. (Currently Amended) The A construct according to claim 68, further comprising a cloning site for introducing a sequence of nucleotides in operable connection with the polynucleotide and the nucleic acid sequence.

115. (Currently Amended) The A construct according to claim 114, wherein the cloning site is a multiple cloning site.

116. (Currently Amended) The A construct according to claim 68, further comprising a polyadenylation sequence.

117. (Currently Amended) The A construct according to claim 68, further comprising a selectable marker.

118. (Currently Amended) The A construct according to claim 68, further comprising an origin of replication.

Comment: (Original): Claim as originally filed - not added by preliminary amendment.
(Currently amended): Claim being amended in present amendment.
(Previously presented): Claim added or amended in a previous amendment paper.
(Canceled): Claim cancelled or deleted from the application. [NO TEXT]
(Withdrawn): Pending but not elected for prosecution.
(New): Claim being added in present amendment.
(Not entered): Claim presented in a previous amendment but which has either not been entered or the status of which is uncertain (as in the submission of a supplemental amendment prior to Examiner response). [NO TEXT]

119. (Currently Amended) The A construct according to claim 68, further comprising a translational enhancer.

120. (Currently Amended) The A construct according to claim 68, which is a vector.

121. (Currently Amended) The A construct according to claim 68, further comprising one or more members selected from the group consisting of:

- a multiple cloning site for introducing a sequence of nucleotides;
- a reporter gene;
- a transcriptional enhancer for enhancing transcription of the polynucleotide;
- a translational enhancer for enhancing translation of the transcript encoded by the polynucleotide;
- a polyadenylation sequence;
- a selectable marker gene;
- an origin of replication;
- an intron; and
- a mRNA nuclear export signal

122. (Currently Amended) The A construct according to claim 114 or claim 121, further comprising at least one site which is cleavable enzymatically, chemically or otherwise to provide a linearised vector into which PCR amplification products can be directly inserted.

123. (Currently Amended) The A construct according to claim ~~107~~ 68, wherein the nucleic acid sequence is from a gene selected from the group consisting of: c-fos, c-jun, c-myc, GM-CSF, IL-3, TNF-alpha, IL-2, IL-6, IL-8, IL-10, Urokinase, bcl-2, SGLT1 (Na(+)-coupled glucose transporter), Cox-2 (cyclooxygenase 2), IL-8, PAI-2 (plasminogen activator inhibitor type 2), beta1-adrenergic receptor and GAP43.

124. (Currently Amended) The A construct according to claim ~~107~~ 68, wherein the nucleic acid sequence is SEQ ID NO:19.

125. (Currently Amended) The A construct according to claim 111, wherein the reporter protein is selected from the group consisting of: Luciferase, Green Fluorescent Protein, Red Fluorescent Protein, SEAP and CAT.

126. (Currently Amended) The A construct according to claim 68, wherein the polypeptide is a protein having at least a light-emitting activity and a selection marker activity.

127. (Currently Amended) The A construct according to claim 126, wherein the polypeptide is encoded by a chimeric gene comprising a coding sequence from a gene encoding a light-emitting protein and a coding sequence from a gene encoding a selectable marker protein.

128. (Currently Amended) The A construct according to claim 126, wherein the polypeptide is encoded by a chimeric gene comprising a coding sequence from a gene encoding: a light-emitting protein selected from the group consisting of: Green Fluorescent Protein, Luciferase; and a coding sequence from a gene encoding a selectable marker protein selected from the group consisting of: kanamycin kinase, neomycin phosphotransferase, aminoglycoside phosphotransferase, puromycin N-acetyl transferase, and puromycin resistance protein.

129. (Currently Amended) The A construct according to claim 114, wherein the sequence of nucleotides comprises a transcriptional control element.

130. (Currently Amended) The A construct according to claim 114, wherein the sequence of nucleotides comprises a promoter.

131. (Currently Amended) The A construct according to claim 114, wherein the sequence of nucleotides comprises a cis-acting regulatory element.

132. (Currently Amended) The A construct according to claim 131, wherein the cis-acting regulatory element is selected from the group consisting of: an enhancer of transcription, an enhancer of translation, an enhancer of mRNA splicing, an enhancer of mRNA export, an enhancer of mRNA degradation, a repressor of transcription, a repressor of translation, a repressor of mRNA splicing, a repressor of mRNA export and a repressor of mRNA degradation.

133. (Currently Amended) An isolated or recombinant cell comprising a the construct according to claim 68.

134. (Currently Amended) The A cell according to claim 133, wherein the cell is a eukaryotic cell.

135. (Currently Amended) The A cell according to claim 133, wherein the cell is a mammalian cell.

136. (Currently Amended) The A cell according to claim 133, wherein the cell is a human cell.

137. (Currently Amended) The A cell according to claim 133, wherein the cell is a plant cell.

138. (Currently Amended) The A construct according to claim 68, wherein the RNA destabilizing element ~~destabilizes the transcript and~~ comprises an AU-rich element.

139. (Currently Amended) The A construct according to claim 138, wherein the AU-rich element comprises the sequence set forth in SEQ ID NO:1.

140. (Currently Amended) The A construct according to claim 68, wherein the polypeptide is a reporter protein comprising a PEST sequence.

141. (Currently Amended) The A construct according to claim 140, wherein the reporter protein comprises Luciferase.

142. (Currently Amended) The A construct according to claim 140, wherein the reporter protein comprises firefly luciferase.

143. (Currently Amended) The A construct according to claim 140, wherein the reporter protein comprises Renilla luciferase.

144. (Currently Amended) The A construct according to claim 68, wherein the RNA destabilizing element ~~destabilizes the transcript and~~ comprises an AU-rich element and wherein the polypeptide is a reporter protein that comprises firefly luciferase and a PEST sequence.

145. (Currently Amended) The A construct according to claim 68, wherein the RNA destabilizing element ~~destabilizes the transcript and~~ comprises an AU-rich element and wherein the polypeptide is a reporter protein that comprises Renilla luciferase and a PEST sequence.

SUMMARY OF TELEPHONIC INTERVIEW CONDUCTED AUGUST 29, 2006

Exhibits and/or Demonstrations

None

Identification of Claims Discussed

Claim 68.

Identification of Prior Art Discussed

Zhao et al.; Eureka Bioscience; and Mateus and Avery.

Proposed Amendments

It was proposed that Claim 68 be amended as specified herein.

Principal Arguments and Other Matters

Applicant's representatives argued that the specification provides an adequate written description for the claims as presently amended. The specification discloses more than merely "a species of RNA elements that destabilize the stability of a transcript that are AU rich elements or U rich elements as disclosed in SEQ ID NO:s 1-23." Specifically, DST elements, which are shown to be as low as 40% AU are disclosed in Paragraph [0342] of the published specification. Histone elements, many of which are actually GC-rich (as low as 16% AU), are disclosed at Paragraph [0363]. Moreover, the *c-fos* coding region instability element is not AU rich. Applicants indicated that references provided scientific support for these statements would be provided in the present Amendment.

Applicant's representatives also argued that the cited references neither render the presently claimed invention anticipated nor obvious. As indicated by the Examiner, Zhao et al. discloses the use of the SV40 polyadenylation signal, and the Eureka reference discloses that this element might lead to RNA destabilization in prokaryotes. However, the claims have been amended to recite an "RNA destabilizing element that reduces the stability of a transcript encoded by the polynucleotide in a eukaryotic cell. Other researchers have shown that removal, not presence, of poly-A tails causes destabilization of RNA in eukaryotes, and that, in fact, the presence of poly-A protects transcripts from degradation in eukaryotes. Thus, the Zhao reference actually teaches the opposite of the claimed invention. The other cited references all disclose RNA-destabilization in prokaryotes, which, as discussed above, is quite distinct from the recited elements that reduce stability in eukaryotes. Applicants again indicated that scientific support would be provided in the present Amendment.

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Results of Interview

The Examiner and her Primary Examiner agreed that the present amendments and arguments would be successful in overcoming the outstanding written description and prior art rejections of Claim 68 and the claims dependent thereon. It was agreed that support for the inclusion of the phrase "in a eukaryotic cell" could be found in Paragraph [0055] of the published specification. The Primary Examiner indicated that rejoinder of the withdrawn claims would require an RCE, since this application is after final. The Primary Examiner suggested that either the withdrawn claims be canceled and pursued in a divisional application or that an RCE be filed. Applicants have elected to cancel the withdrawn claims, and will be pursuing claims directed to their subject matter in a divisional application to be filed prior to the grant of a patent on the present application.